




Type	<i>Rescue ram R</i>	Year of manufacture	
Factory No.:			
Unit holder:			Card SL-R-1
Regulations:	- Operating instructions (unit)	- GUV-G 9102	Test Interval: - in accordance with GUV-G 9102 - after repair
	- Operating instructions (test equipment)		

Fundamental safety instructions:




WARNING / CAUTION / ATTENTION!

Personal protection equipment must ALWAYS be worn when testing units!



In addition, ALWAYS use adequate shielding when carrying out the tests!

LUKAS rescue equipment can only be tested using LUKAS testing equipment!



NOTE:

Before using this test card check the currentness of the card and only use the latest version. The latest unit test cards can be obtained on the LUKAS web page or directly from LUKAS.

Required testing equipment:

- Test unit with a max. operating pressure of 70 MPa (1 MPa = 10 bar)
- Test frame for rescue rams
- Test pressure gauge
- Stopwatch
- Adapter set for test pressure gauge, if included
- Appropriate safety shielding

Evaluation:

Findings:					
Repaired on:					
Released for use on:					
Disabled / no longer released for use on:					
Signature of tester:					

SL_R_1_GPK_GB_1209

Visual inspection:

Tests	Target value	Result	Result	Result	Result
Rams and piston rods show no damage or deformation					
Claws present and correctly seated					
Condition of the claws (no nicks or similar)					
General tightness, no leaks					
Mobility of the star grip and automatic resetting to the neutral position					
Handle present and secure					
Piston stroke can be extended and retracted over full length	1)				
Type plate present and legible					
Actuating labels, instruction labels, markings and warning notes present and legible					
Bending protection present and undamaged					
Couplings present, undamaged, easy to couple and no leaks					
Dust protection caps present and undamaged					
All hose lines undamaged					
The hose lines are less than 10 years old (see stamped date)					

1) The target values can be taken from the data table of the individual unit and must be entered in the test table.
(The data table can be found on the next page!)

Notes concerning visual inspection:

Operational check:

Tests	Target value	Result	Result	Result	Result
Average ambient temperature during operational testing					
Pressure with running pump without actuating the unit (p_1 in bar)					
Pressure when extending (p_2 in bar)					
$p_{DIFF} = p_2 - p_1$ (bar)	2)				
Ram extension time, completely and unloaded (in seconds)	3)				
Ram retraction time, completely and unloaded (in seconds)	3)				
Compressive force test	2)				
Pressure force retention test Pressure or force drop after 1 min.	2)				
No onward movement when releasing the star grip during opening or closing	4)				

- 2) The target value range can be taken from the data table of the individual unit and must be entered in the test table. (The data table can be found on the next page!)
- 3) Depending on the feed rate of the test hydraulic unit used, you must take the individual set target value from the diagrams (to be found on the following pages) and enter it in the position "Set value" in the test table. The flow rate can be taken from the technical data of the hydraulic power pack (possibly on the type plate of the hydraulic power pack). [Time deviations of $\pm 15\%$ are acceptable]
Please note, when reading from the diagram, that the rams extend at low pressure, and retract at high pressure.
- 4) The piston rod must stay in its present location when the control valve setting part is released. The setting part of the control valve must return automatically to the starting position. A brief overrun of up to 0.5 seconds is permissible when retracting and extending the ram not under load. When starting again in the same load direction, no force or pressure drop must be detected on the pressure gauge of the force measurement device.

Notes concerning the operational test:

Data table:

Type			R 410	R 412	R 414
Maximum piston stroke		[mm]	300	500	700
p _{DIFF}	min.	[bar]	0	0	0
	max.	[bar]	70	70	70
Compressive force test	min.	[bar]	750	750	680
	max.	[bar]	860	860	780
Pressure force retention test Pressure or force drop after 1 min.	min.	[bar]	615	615	555
	max.	[bar]	760	760	690

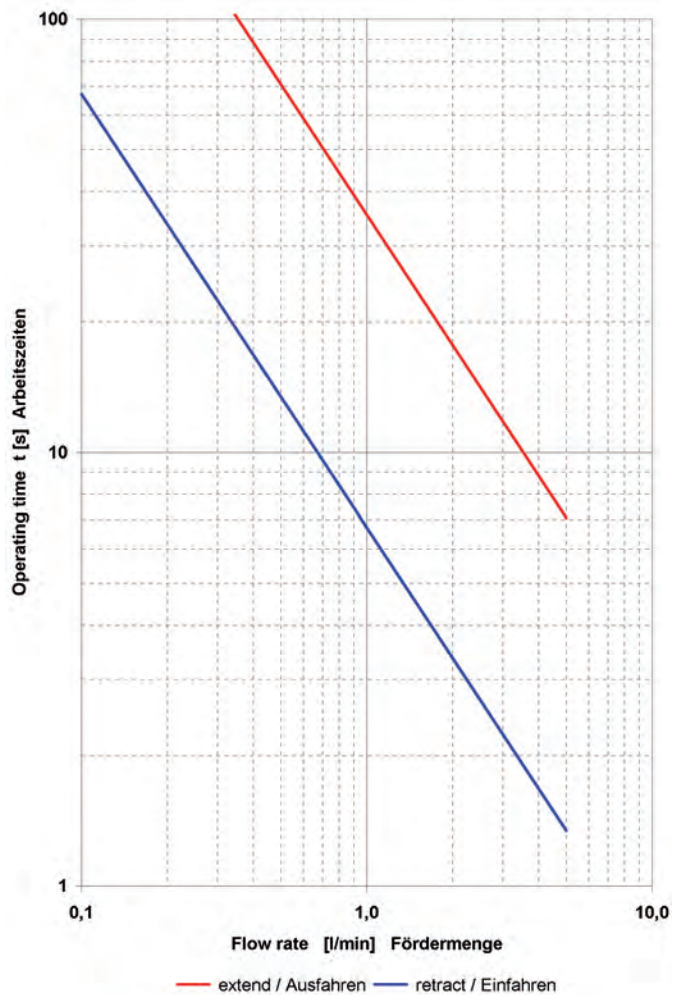
Type			R 420	R 422	R 424
Maximum piston stroke		[mm]	575	705	875
p _{DIFF}	min.	[bar]	0	0	0
	max.	[bar]	70	70	70
Pressure force test (2nd stage)	min.	[bar]	740	740	740
	max.	[bar]	850	850	850
Pressure force retention test Pressure or force drop after 1 min.	min.	[bar]	615	615	615
	max.	[bar]	760	760	760

Type			R 430
Maximum piston stroke		[mm]	820
p _{DIFF}	min.	[bar]	0
	max.	[bar]	70
Pressure force test (2nd stage)	min.	[bar]	740
	max.	[bar]	850
Pressure force retention test Pressure or force drop after 1 min.	min.	[bar]	605
	max.	[bar]	750

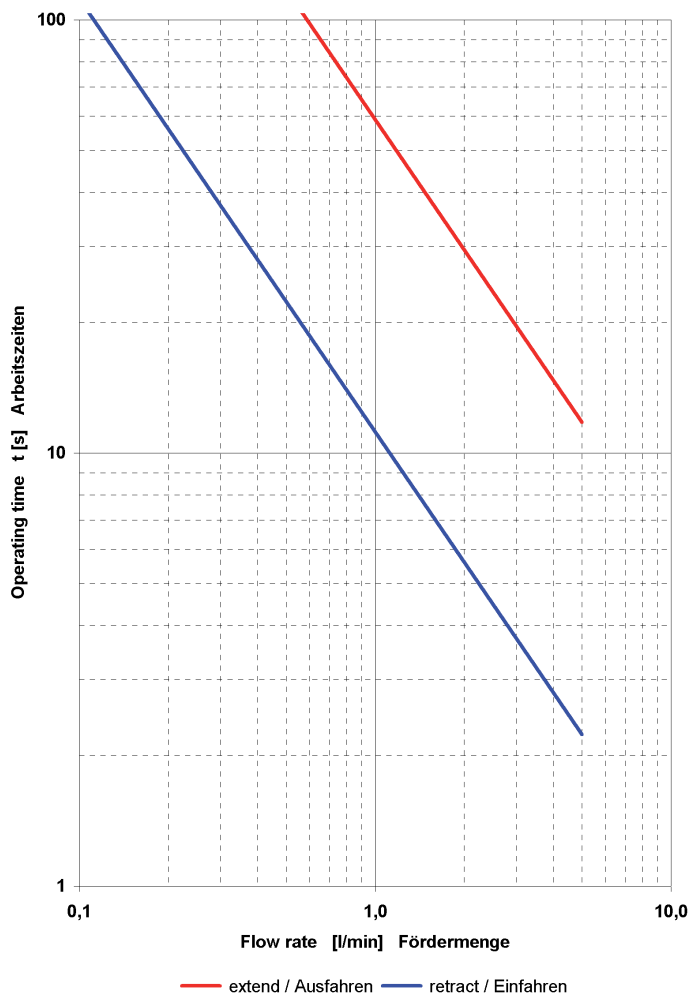
1 MPa = 10 bar

Diagrams:

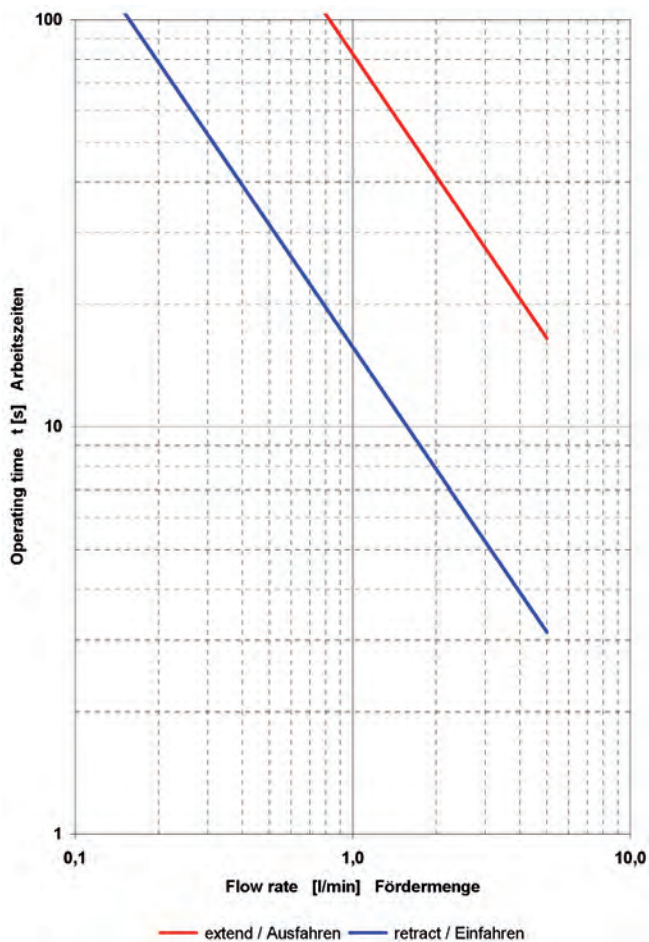
R 410



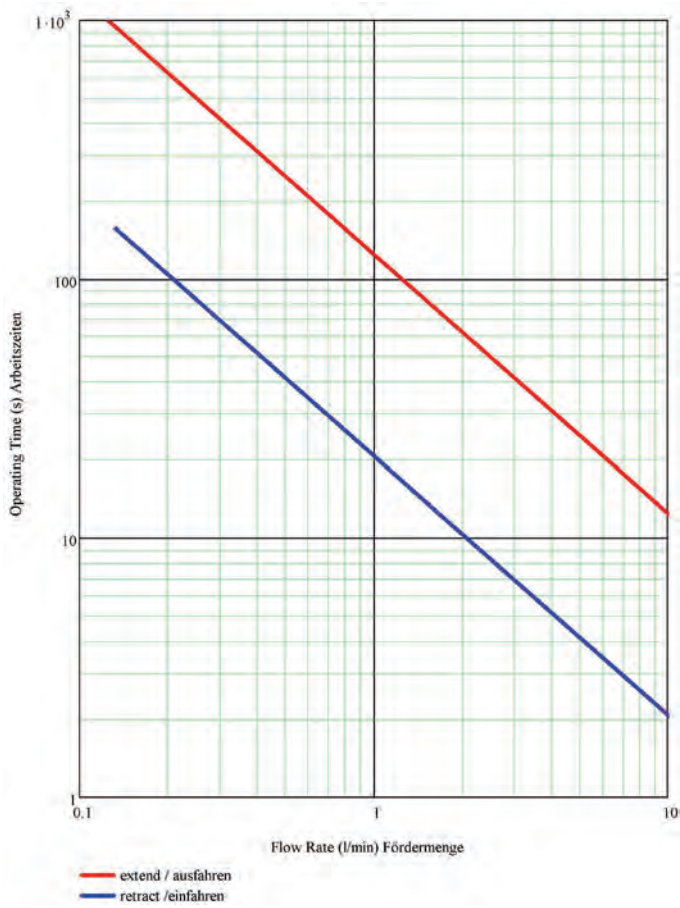
R 412



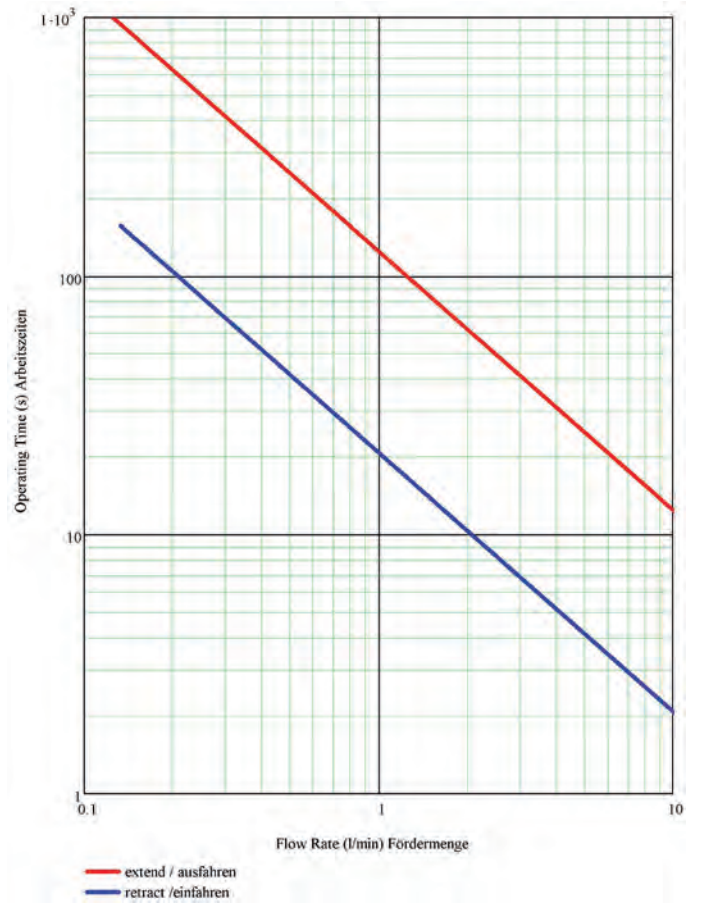
R 414



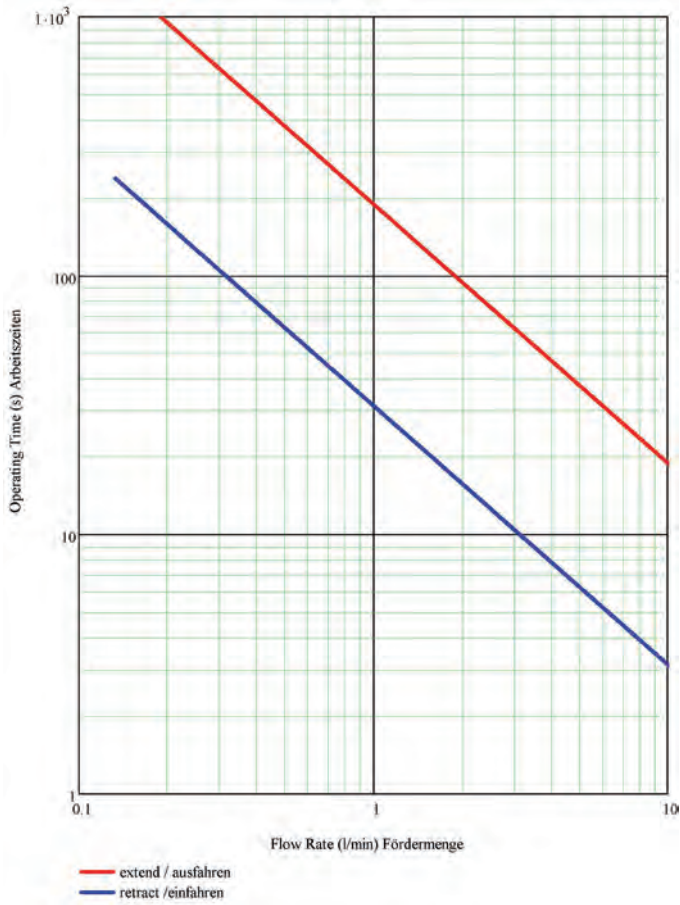
R 420



R 422



R 424



R 430

